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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/722,400	11/27/2000	Tianhong Zhang	MIC-58DV2	5784

7590

03/11/2004

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EXAMINER

MOHAMEDULLA, SALEHA R

ART UNIT

PAPER NUMBER

1756

DATE MAILED: 03/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No.

09/722,400

Applicant(s)

ZHANG ET AL.

Examiner

Saleha R. Mohamedulla

Art Unit

1756

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 13 February 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☒ The period for reply expires 5 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☒ A Notice of Appeal was filed on 13 February 2004. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ they raise the issue of new matter (see Note below);
- (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____

3. ☒ Applicant's reply has overcome the following rejection(s): NONE.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: NONE.Claim(s) objected to: NONE.Claim(s) rejected: 9-12,27,29-40 and 42-50.Claim(s) withdrawn from consideration: NONE.

8. ☐ The drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
10. ☐ Other: _____

Continuation of 5. does NOT place the application in condition for allowance because:

Applicant argues that the openings in Tsutsui are not openings therethrough because the openings do not extend through a layer of material resistant to the claimed etchant. However, the openings in Tsutsui extend through the layer resistant to the etchant. On either side of the Au-WSi layer, there are complete openings, that is, openings that extend all the way through the openings, as the Au-WSi layer does not exist in these openings.

Applicant argues that the layer is not a masking layer, however, the layer is a mask as the layer is not etched while underlying layers are etched and because they cover or mask underlying layers. Applicant attempts to define the term "mask" in arguments, however, this definition is not supported by the original disclosure. Applicant states that it is well known that masks permit selective removal of material underneath the structure, but provides no support for such an exclusive limited definition. Within the semiconductor processing art, the term "mask" is not solely limited to the use and definition offered by Applicant. As already stated, the Tsutsui structure is a mask because the layer is not etched while underlying layers are etched and because they cover or mask underlying layers. In addition, the layer is used in the deposition of layer 10 and is therefore a mask in this respect as well. In addition, Figure 5 shows the WSi layer, a layer made of material resistant to the claimed etchant, used as a structure that permits selective removal of material underneath the structure (Applicant's definition of mask).

Applicant argues that no use of hydrogen fluoride etchant is disclosed when discussing the etching. However, the invention of Tsutsui is specifically directed to hydrogen fluoride etching. The title of the Tsutsui invention is "Hydrogen Fluoride Vapor Phase Selective Etching Method for Fabricating Semiconductor Devices."

Applicant argues that there is no motivation to combine Tsutsui and Farnworth. However, Farnworth teaches that the specific material of a polyimide is commonly known in the art for the application of Tsutsui. The references are analogous art as they are both drawn to patterning semiconductor layers using photosensitive and etching processes. Applicant argues that there is no motivation to combine Tsutsui and Cloud. However, the references are analogous art as they are drawn to forming gate structures for semiconductor devices and Cloud teaches the desirability of using the claimed polyimide.

Therefore, Applicant's arguments are not persuasive.

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